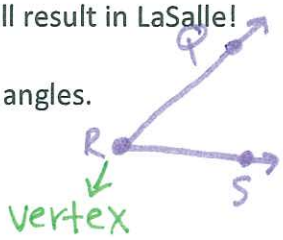
HW#10: Name, Classify, & Measure Angles
FORM A
Geometry
Due Date: Thursday, Sept. 19th, 2013

Name: _____ TP: _____

Directions: Failure to show all work and write in complete sentence will result in LaSalle!

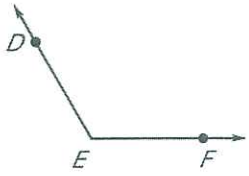
Name three angles in each picture. Then, name the vertex of all three angles.

① Angles are named with 3 points!
② The vertex is the middle point when naming the angle.

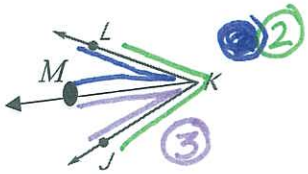


Names:
∠QRS
or
∠SRQ
or
∠R (if angle is by itself)

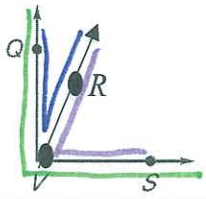
1)



2) ① ∠LKM

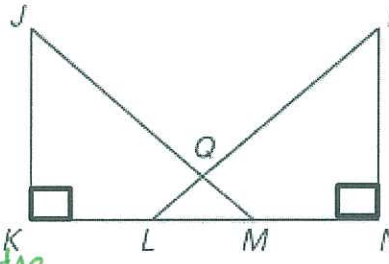


3)



Give another name for the angle in the diagram. Tell whether the angle appears to be acute, obtuse, right, or straight.

4)

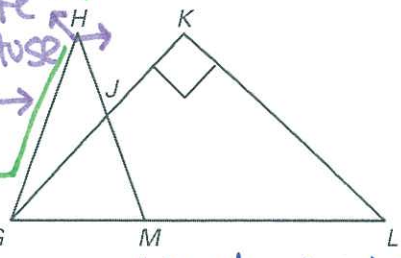


Less than 90° → acute
Greater than 90° → obtuse
Straight → 180° ↔
Right → 90° ⌐

*switch the order of the letters.

a. ∠JKN ∠NKJ Right
b. ∠KMN ∠NMK Straight
c. ∠PQM _____ _____
d. ∠JML _____ _____
e. ∠QPN _____ _____
f. ∠PLK _____ _____

5)



a. ∠HGM ∠MGH Acute
b. ∠KLG _____ _____
c. ∠KJM ∠MJK Obtuse
d. ∠JKL _____ _____
e. ∠HML _____ _____
f. ∠GJK _____ _____

Tell whether the statement is *always, sometimes,* or *never* true. *Explain* your reasoning (use examples!)

6) The measures of two acute angles add up to 90°. Acute angles are less than 90° EX 1: 10° + 15° / EX 2: 85° + 22°

slope-intercept form REVIEW!!

1. Find slope
2. Plug in all values to $y=mx+b$
3. Solve for b!
4. Re-write slope-intercept form with slope (m) & y-intercept (b)

1) Write an equation in slope-intercept form of a line that passes through the points (-2, 5) and (4, 7)

① Slope $= \frac{y_2-y_1}{x_2-x_1} = \frac{7-5}{4--2} = \frac{2}{6} = \boxed{\frac{1}{3}}$ (x_1, y_1 = (-2, 5); x_2, y_2 = (4, 7))

② (-2, 5) (x_1, y_1)

③ $y=mx+b$

$5 = \frac{1}{3}(-2)+b$

$5 = \frac{-2}{3}+b$

$+\frac{2}{3} \quad +\frac{2}{3}$

$\boxed{5\frac{2}{3}=b}$

④ $y=mx+b$

$\boxed{y=\frac{1}{3}x+5\frac{2}{3}}$

2) If a line has a slope of $\boxed{-\frac{2}{5}}$ and passes through the point (3, 7), write an equation for this line in slope-intercept form.

① $m =$

② (3, 7) (x_1, y_1)

③ $y=mx+b$

3) Write an equation for a line parallel to $6x-5y=15$ and travels through the point (5, -2)

① Solve for $\boxed{y}$

② Parallel slopes are the SAME.

③ Follow steps 2-4 from the top of this paper.

4) Circle the equation of the line with the steepest slope.

Steepest slope = BIGGEST $\boxed{m}$ value! (absolute value)

① Solve for $\boxed{y}$ first!

$2x = 6 - 2y$

$-6 \quad -6$

$\frac{2x-6}{-2} = \frac{-2y}{-2}$ → $\boxed{y=-x+3}$ $\boxed{m=-1}$

$7x = 5 - y$

$0 = -2 + x + y$

$-y + -8x = -3$

FORM A

HW#11: Angle Pair Relationships
Geometry
Due Date: Friday September 20th, 2013

Name: _____ TP: _____

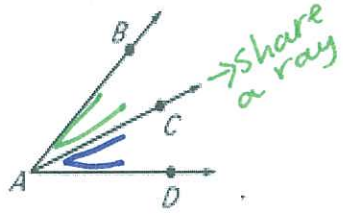
Directions: Failure to show all work and write in complete sentences will result in LaSalle!

1) Complementary: Angles that sum/add to 90°
$\angle 1 + \angle 2 = 90°$

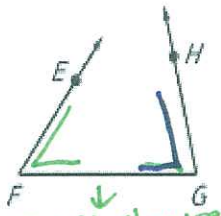
Supplementary: Angles that sum/add to 180°
$\angle 1 + \angle 2 = 180°$

Tell whether the indicated angles are adjacent.*

a.) $\angle BAC$ and $\angle CAD$ b.) $\angle EFG$ and $\angle HGF$



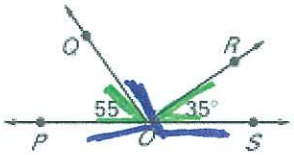
→ share a ray



Don't share a ray

Adjacent: SHARE a ray (right next to each other)

2.) Name a pair of complementary angles and a pair of supplementary angles.



a) Complementary: Look at the green ∠s!

b) Supplementary: Look at the blue ∠s!

3.) ^1 and ^ 2 are complementary angles. Given m^1, find m^2.

a.) m^1= 52°

$m\hat{}1 + m\hat{}2 = 90$
$52 + m\hat{}2 = 90$
$-52 \quad -52$
$m\hat{}2 = 38°$

b.) m^1= 76 °

$m\hat{}1 + m\hat{}2 = 90$

4.) ^1 and ^2 are supplementary angles. Given m^1, find m^2.

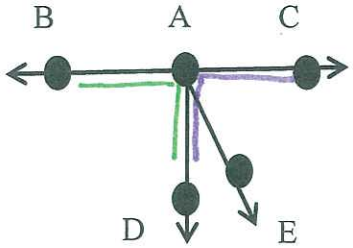
a.) m^1= 147°

$m\hat{}1 + m\hat{}2 = 180$

b.) m^1=94°

5.) Name 5 angles in this picture.

- Use 3 letters to name angles
- The vertex must be the middle point!



a.) ∠BAD

b.) ∠CAD

c.)

d.)

e.)

6.) Classify each angle as obtuse, acute, right, or straight.

180° straight

Bigger 90° obtuse
Smaller 180° obtuse

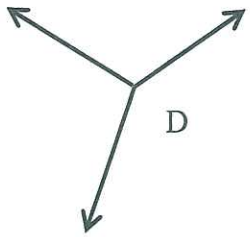
90° right

Smaller 90° acute
Bigger 0° acute

a.)

b.)

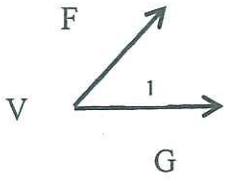
7) Why can't we name any of the angles in the picture ^D?



what do you need to name {ray, angle with other rays?

8.) What type of angle is shown? What 4 names can it have?

Look back at your notes!



a.)

b.)

c.)

d.)

9) Write an equation in slope-intercept form of a line that passes through the point (-5, 9) and has a slope of $\frac{3}{7}$ Look @ HW10 from yesterday!

① Plug in all values to $y=mx+b$
② Solve for b!
③ Re-write slope-intercept form with slope (m) & y-intercept (b).

$m=\frac{3}{7}$ $(-5, 9)$ x_1 y_1

10) Write an equation for a line parallel to $y = 2x + 3$ passing through (4,-5).

Follow 1-3 from #9 (remember, parallel lines are the same).

11) Write an equation for a line parallel to x + 15 = -5y passing through (0, 4).

① Solve for Y & find slope
② Follow steps 1-3 from #9.

12) Circle the equation of the line with the steepest slope.

① Solve for Y!
② Find the biggest |m|. (slope)

$x + 0.2y = -0.6$ $-x$ $-x$

$\frac{0.2y}{0.2} = \frac{-x}{0.2} - \frac{0.6}{0.2}$ $y = -5x - 3$

$-5 + 10x = -y$

$0 = 3 - x - y$

$6x - 20 + 5y = 0$

Name: _____ TP: _____

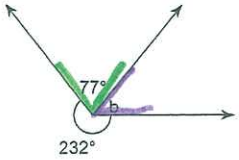
HW#12: Missing Angles
Geometry
Due Date: Monday September. 23. 2013

Vertical Angles
- Congruent ≅
- opposite each other

Supplementary Angles
- Add to 180°
- Make a STRAIGHT line

Complementary Angles
- Add to 90°
- Make a "corner"

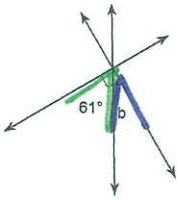
1. Find the measure of b.



$b + 77 = 232$
$-77 \quad -77$

$b = 155°$

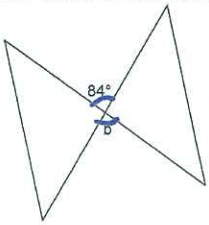
2. Find the measure of b.



$61 + b = 90$
$-61 \quad -61$

$b = 29°$

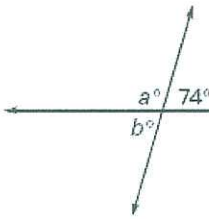
3. Find the measure of b.



b° & 84° are opposite! These are called _____ angles!

Therefore, b = ____°.

4. Find $a°$ and $b°$.

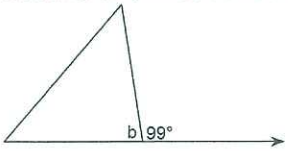


① What is the relationship between a° and 74°?

② What is the relationship between b° and 74°?

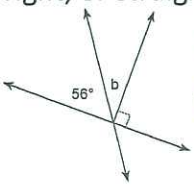
a = ____° b = ____°

5. Find the measure of b.



$b° + 99 = 180°$

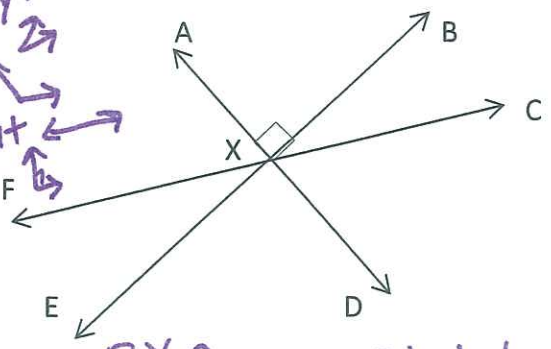
6. Find the measure of b. Is angle B acute, obtuse, right, or straight?



① Set up an equation!
② Solve!

7. Use the figure below, to give another name for the angle in the diagram and classify the angle.

Classify:
Acute
Obtuse
Straight
Right



$\angle AXB$	∠BXA	Right
$\angle CXE$		
$\angle FXE$		
$\angle BXD$		
$\angle DXE$		

8. a. Tell whether the following angles are Acute, Obtuse, Right, or Straight. (Look @ #7)

b. Then state if they are complementary, supplementary or neither. Justify your response using degree measures. (comp. = __°) (supp. = ___°)

9) Write an equation for a line parallel to -1 = -x + y passing through (4, 3).

$-1 = -x + y$
$+x \quad +x$

1) Find slope
2) Plug into y=mx+b

$y = x - 1$

3) Solve for b
4) Re-write m & b into y=mx+b.

10) Write an equation for a line perpendicular to 4x + 8y = 12 and passing through (1, -9).

1) Solve for y
2) Do steps 1-4 from #9
3) Remember, perpendicular means opposite reciprocal. EX: $\frac{1}{2} \rightarrow -2$).

11) Write an equation for a line perpendicular to -7y + 3 = 21x and passing through (-3, 6).

Follow steps in #10.

12) Circle the equation of the line with the steepest slope. 1) Solve for y 2) Identify line with biggest |m| (slope).

$-3 = -y + 3x$

$3 - 3y = -3x$

$0.5x = 1 + 0.2y$

$y = 8x + 3$